Tank-automotive and Armaments Command,
Armament and Chemical Acquisition and Logistics Activity

Volume 99-02

January 1999

RADIATION SAFETY INFORMATION BULLETIN

INSIDE THIS ISSUE:

ANOTHER TEST!?!

The new incarnation of our NRC license requires RPO's at installations to have a proficiency evaluation every 2 years. That sounds like a pain and a vaguely threatening one at that. No one likes tests.

First lets say why that requirement is even in there. The Nuclear Regulatory Commission has expressed concern over the fact that TACOM-ACALA, as a licensee, keeps no information on the installation radiation protection officers. The NRC understands that it is you installation RPO's that are the glue in our radiation safety program. "How", they ask, "can we (TACOM-ACALA) run a program without knowing anything about the qualifications of the RPO's that make it work?" That's a good question and, actually they are correct. As you know we don't keep records on the RPO's training at installations. We only look at them when our inspector comes to visit. There is a need to make training available to RPO's on a recurring basis to help them manage the installation program and to refresh their knowledge of radiation safety. The license as it is now written commits us to doing that.

To allow you to prove your proficiency we are developing quick and easy web based questionnaire. If you can answer a few simple questions you are home free. If this proves to be difficulty or if you feel you would like to brush up your knowledge you will the able to review some on-line training.

The training side of this plan is well underway. Right now you can access refresher training on the TACOM-ACALA web site at http://www-acala1.ria.army.mil under the Army Electronic Product Support (APES) key. The training can be accessed under "On Line Training" then selecting "RPO Training" from the menu. You will need to establish a user ID and personal password to access this material.

In addition, the TACOM-ACALA is preparing computer-aiding RPO training through the U.S. Army Ammunition Center and School. This will become available by the next FY. We will update you on this project in these pages. The purpose is to provide assistance in managing your installation radiation safety program.

Let us know if you have any ideas on how we can better make this license program work for you.

When Equipment with Radioactive Sources Gets Lost

The Title 10 Code of Federal Regulations requires that all licensed radioactive material must be controlled at all times. When equipment containing radioactive material is lost, specific notifications must be made and every effort must be exercised to bring the material back under control. Lost radioactive material is defined as any situation where the exact location of the material is unknown. At the time of discovery that equipment containing radioactive material is lost, a chain of notification must take place from the user level all the way to the organization responsible for the License issued by the Nuclear Regulatory Commission which covers the material. A distinction must be made between reporting lost radioactive material which is covered by Federal statute (law) and the Army's requirements for property accountability which are covered by Regulation. The Federal Statute covering radioactive material is concerned with health and safety whereas the Army Regulation is concerned with minimizing financial loss to the Government. In this case the Federal statute takes precedence. Therefore, as soon as it is determined that equipment containing radioactive material is lost, the notification process must begin immediately along with efforts to recover the missing radioactive material.

Why Do We Stick Our Nose In Your Business?

Many RPOs and safety personnel throughout the Army ask, "Why should I listen to ACALA? If it's their license let them deal with it."

Well, let's look at this closely. Many years ago when alternate methods of low light instrument viewing were researched, it was discovered that the spectral wavelength of Tritium would dissipate a short distance from the phosphor. This meant that the probability of enemy detection was low. But because Tritium was a by-product material, and byproduct materials were actively regulated, it had to be licensed. Because the Army wanted Tritium, and the regulatory environment at the time was more military friendly, the TACOM-ACALA received the mission of license management.

Unfortunately everything changes. The regulatory atmosphere we live in is not the same as it was in 1978. The TACOM-ACALA walks the fine line between Regulatory Compliance and Mission Effectiveness. The latest version of the Tritium license gives the Army its greatest latitude in operational perimeters since the original license. The only thing better than this license would be to get rid of Tritium all together.

The Elimination of Radioactive Light Sources project will give us that option. The ERLS spectral output is similar to Tritium without the associated regulatory infringement on operations. In our current, and foreseeable, regulatory atmosphere the ERLS project is a viable alternative. Until the Army wants ERLS as it once wanted Tritium, we will continue to walk that fine line.

Remember, when we impose rules and policy, it's because we have a fundamental legal responsibility to protect the health and safety of occupational workers and the public sector. As a private citizen, we should expect no less.

"The regulatory atmosphere we live in is not the same as it was in 1978."

(From Our Friends At The IOC)

U.S. Army Industrial Operations Command License Amendments

The Nuclear Regulatory Commission has amended the two licenses held by the U.S. Army Industrial Operations Command (IOC). These amendments reflect command reorganization changes and changes on instrument calibration standards. The two licenses held by the IOC are BML 12-00722-07 for Promethium 147 in the front aiming sight of the Light Anti-tank Weapon Rocket System (LAW) and SUC-1380 for Depleted Uranium as cartridge penetrators. Both amendments will be posted on the IOC Safety/Rad Waste Team web page in the near future. The IOC web page is at http://www.ioc.army.mil/dm/dmwweb/Licenseindex.htm.

POC is Paul Grooms and Gary Buckrop, IOC Safety/Rad Waste Team, DSN 793-2976 and DSN 793-2968 respectively or commercial at (309) 782-2976 and (309) 782-2969 respectively.

Tritium Fire Control Maintenance

The Radioactive Warning Page inside the front cover of the Technical Manuals (TMs) expressly forbid the removal or replacement of tritium sources. Tampering with sources is a violation of the NRC license and therefore federal law. Yet, the TMs seemingly authorize the removal replacement of same sources? What is going on here? The solution to this mystery is that you must distinguish between source and modular maintenance. Modular removal/replacement is authorized by the NRC license.

The M224, M252, M120/M121 Mortars and M102, M119, and M198 Howitzers use tritium modules for illumination of level vials/reticles/counters. NO SOURCES ARE LISTED IN THE RPSTL's (repair parts and special tools list). The removal of these modules is allowable during the course of normal maintenance at General Support Units/Directorate of Logistics. Further break down of these modules to remove the sources is not authorized and will violate the Army's tritium license.

The M198 fire control Technical Manual TM 9-1240-375-34P has yet to be updated and printed. All Source, Maintenance and Recoverability (SMR) Codes for the tritium modules have been changed from PCD-- to PCHZA.

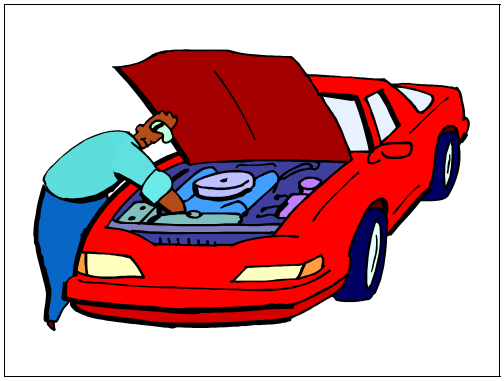
Procedure: The fire control device must be dark roomed for 24 hours and then checked for illumination of all sources/modules. If all sources/modules are illuminated maintenance can begin. If any source/module is not illuminated, no maintenance is authorized. Notify the Radiological Protection Officer/Safety Officer as soon as possible for instructions.

If further assistance is needed contact Mr. John Johnson, TACOM-ACALA at DSN 793-0126 commercial (309) 782-0126 or at email johnsonj2@ria.army.mil.

"The solution to this mystery is that you must distinguish between source and modular maintenance."

A Tune Up For Your Radiation Protection Program

Do you ever feel like all you get is taskers and never any help? How would you like a hand with your radiation protection program? We are continuing to offer our consultation to help you fine tune your Radiation Protection Program. **THIS IS NOT AN INSPECTION!** We will gladly come to your site, free of charge, at what ever time works best for you and your schedule, and consult with you on ways to make your program and ours work better. This helps us understand what challenges you may face and it helps you understand how to best meet our license requirements. Last year we visited several posts and got very good feedback from this service. Listen to what some of our customers had to say:



"I think the assistance visits are very important. It gave us the opportunity to have a TACOM-ACALA representative look at the areas of our program where we have concerns, without repercussions." - Cathleen Shank, Safety Specialist, USASOC RPO

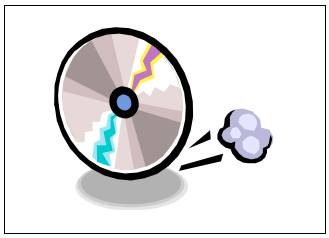
"I am very appreciative of the assistance provided to my Radiation Safety Program here at Anniston." - Robert J. Curry,
Health Physicist

So what are you waiting for? Pick up the phone and schedule your Consultation today! (DSN 793-6499)(amsta-ac-sf@ria.army.mil)

Where Is My Free CD ROM?

Some of you have submitted requests for our FREE CD in the last couple of months but have not received your copy yet. The reason is that we are in the process of updating all of our training material and plan to have those updates ready to be sent this month (January).

In the mean time you now have a choice of data sources. Department of Army, with the help of CECOM, has taken our idea and merged it together with additional information from other licensees. They are now distributing this DA RPO Reference CD to those



who request it. Just point your browser to www.sed.monmouth.army.mil/rdit/pages/da_rso.htm and request your copy. This DA CD has all the information previously found on our CD and more. However, if you would still like to get our training material in Microsoft® PowerPoint format (the DA CD displays data only as an Adobe® Acrobat file) we would be happy to send it to you just see our web site at www-acala1.ria.army.mil. Happy computing!

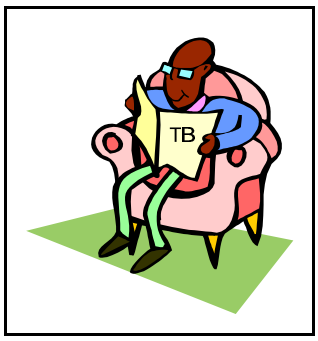
"We are continuing to offer our consultation to help you fine tune your Radiation Protection Program."

REVISION OF TB 43-0197 FORTHCOMING

Just in time for the new year, a newer and more comprehensive version of TACOM-ACALA's technical bulletin dealing with the management of its licensed radioactive commodities is under development. The original bulletin debuted in March of 1982; the most recent revision was distributed in September of 1997.

The new revision should be ready for publishing and distribution by the end of January, 1999. The principal topical sections have been drafted and work is currently focused on reorganization and expansion of the document appendices. It is hoped and anticipated that the customer will find the revised document more technically comprehensive, better organized, and more focused on the practical needs of the end users.

Since the last publication of this bulletin, the radioactive materials licenses which govern TACOM-ACALA commodities have been reviewed and consolidated, and new requirements issued under a single license. The information provided in the new revision will reflect a thorough consideration of new license requirements. The revision is scheduled to undergo an extensive internal review as well as review by most, if not all, of the Army major commands.



Local and installation-level RPO's as well as end users are strongly encouraged to examine this latest bulletin revision and provide feedback to TACOM-ACALA. Army field personnel are our most important customer, and your opinions help to direct us in our efforts to better serve your needs!

NEW NRC LICENSE CONTAMINATION LIMITS AND DISPOSITION INSTRUCTIONS

As stated in the last newsletter, the Nuclear Regulatory Commission (NRC) recently approved TACOM-ACALA license, 12-0022-06, (see http://www-acala1.ria.army.mil/ACALA/SAFETY/nrc.htm). The new radioactive contamination limits are displayed in the following table:

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CONTAMINATION LIMITS* IN DISINTEGRATIONS PER MINUTE (DPM)

RADIONUCLIDE	FACILITY AREAS (UNRESTRICTED)	EQUIPMENT (UNCONTROLLED)
Tritium (H3)	1,000	1,000
Nickel (NI63)	1,000	1,000
Americium (AM241)	22	20
	(RESTRICTED)	**(CONTROLLED)**
Tritium (H3)	10,000	10,000
Nickel (NI63)	1,000	1,000
Americium (AM241)	220	20

*CAVEAT: This table presents the upper license limits. However, we still must ensure compliance with ALARA or "as low as is reasonably achievable" (Title 10 CFR 20.1101). Decontaminate before releasing equipment.

Ensure compliance with ALARA or "as low as is reasonably achievable" (Title 10 CFR 20.1101).

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Because these are new contamination limits, the disposition instructions will change also. The following paragraphs summarize the new disposition instruction as they will appear on the Rock Island Arsenal's "Radioisotope Analysis and Laboratory Results."

NEW DISPOSITION INSTRUCTIONS FOR AMERICIUM-241 CHEMICAL AGENT DETECTOR (M8A1 / M43A1)

1. The maximum allowable removable contamination is 20 disintegrations per minute (DPM) for equipment, 22 DPM for unrestricted areas, and 220 DPM for restricted areas.

2. If the test result(s) are not within acceptable contamination levels, notify your Radiation Protection Office (RPO) immediately so that prompt action can be taken.

a. If this test result applies to facilities, the RPO will decontaminate the area(s).

b. If this test result applies to equipment, action must be taken to remove the M43A1 from service. The RPO or safety office must contact TACOM-ACALA safety office to receive disposition instructions for the contaminated item. Double bag the item and place the item in a designated radioactive waste storage area. The owning unit must report the contaminated M43A1 as EXCESS by filling out a report of excess document identification FTE card in accordance with AR 725-50 and mailing it to:

U.S. Army Soldier Biological and Chemical Command (SBCCOM-RI)
AMSBC-HB (RI), Bldg 62
Rock Island, IL 61299

DO NOT SEND THE M43A1 TO THIS ADDRESS

3. Place all contaminated material(s) in a designated low level radioactive storage area. Contact the U.S. Army Industrial Operations Command, AMSIO-SF office for disposal instructions (see Disposal Instructions below).

4. If you have any questions regarding these instructions, please contact the following POC's:

a. U.S. Army Soldier Biological and Chemical Command (SBCCOM-RI), AMSBC-HB (RI), Item Manager, DSN 793-5131 or commercial (309) 782-5131.

b. U.S. Army Tank-automotive & Armaments Command (TACOM), Armament Chemical Acquisition and Logistics Activity (ACALA), AMSTA-AC-SF, Safety Office DSN 793-6228/2965/2995, commercial (309) 782-6228/2965/2995.

c. Rock Island Arsenal Radiation Test Lab, SIORI-SEM, test result information: Mr. Thomas G. Gizicki or Mr. Ronald Lund, DSN 793-7889/7925 commercial (309) 782-7889/7925.

NEW DISPOSITION INSTRUCTIONS FOR NICKEL-63 CHEMICAL AGENT MONITOR (CAM), IMRPOVED CAM (ICAM) AND AUTOMATIC CHEMICAL AGENT DETECTOR ALARM (ACADA) (M22 / XM88)

1. The maximum allowable removable contamination is 1,000 disintegrations per minute (DPM) for equipment and areas.

2. If the test result(s) are not within acceptable contamination levels, notify your Radiation Protection Office (RPO) immediately so that prompt action can be taken.

a. If this test result applies to facilities, the RPO will decontaminate the area(s).

b. If this test result applies to equipment, action must be taken to remove the CAM from service. Double bag the item and give it to your RPO. The RPO or safety office must contact TACOM-ACALA safety office to receive disposition instructions for the contaminated item. If the item is not contaminated or can be decontaminated to 1,000 DPM or below it may be returned to depot for repair. The RPO must contact the SBCCOM-RI item manager to receive specific disposition instruc-

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New Disposition Instructions for the M8A1 (M43A1), CAM, ICAM and ACADA.

(Continued from page 6)
tions (see POCs below).

DO NOT SEND THE CAM, ICAM, ACADA TO SBCCOM-RI.

3. Place all contaminated material(s) that can't be decontaminated below 1,000 DPM in a designated low level radioactive storage area. Contact the U.S. Army Industrial Operations Command, AMSIO-SF office for disposal instructions (see Disposal Instructions below).

4. If you have any questions regarding these instructions, please contact the following POC's:

a. U.S. Army Soldier Biological and Chemical Command (SBCCOM-RI), AMSBC-HB (RI), Item Manager, DSN 793-5961 or commercial (309) 782-5961.

b. U.S. Army Tank-automotive & Armaments Command (TACOM), Armament Chemical Acquisition and Logistics Activity (ACALA), AMSTA-AC-SF, Safety Office DSN 793-6228/2965/2995, commercial (309) 782-6228/2965/2995.

c. Rock Island Arsenal Radiation Test Lab, SIORI-SEM, test result information: Mr. Thomas G. Gizicki or Mr. Ronald Lund, DSN 793-7889/7925 commercial (309) 782-7889/7925.

NEW DISPOSITION INSTRUCTIONS FOR TRITIUM FIRE CONTROL ITEMS

1. The maximum allowable removable contamination for fire control equipment containing tritium is 1,000 disintegrations per minute (DPM) for unrestricted areas and uncontrolled equipment. The contamination limit for restricted areas and controlled equipment is 10,000 DPM. These limits do not pertain to environmental samples.

2. If the test result(s) are not within acceptable contamination levels, notify your Radiation Protection Office (RPO) immediately so that prompt action can be taken.

a. If this test result applies to facilities, the RPO will decontaminate the area(s).

b. If this test result applies to equipment, action must be taken to remove the item from service. Double bag the item and give it to your RPO. The RPO or safety office must contact TACOM-ACALA safety office to receive disposition instructions for the contaminated item. If the item is not contaminated or can be decontaminated to 1,000 DPM or below it may be returned to depot for repair. The RPO must contact the TACOM-ACALA item manager to receive specific disposition instructions (contact the TACOM-ACALA safety office for the item manager or visit the web page Radiation Safety Information at: http://aeps2.ria.army.mil/ssn/radiation/rad.html and click on ACALA Radioactive Items By NSN (http://aeps2.ria.army.mil/ssn/radiation/raditems.pdf).

DO NOT SEND TRITIUM DEVICES TO TACOM-ACALA.

3. Place all contaminated material(s) that can't be decontaminated below 1,000 DPM in a designated low level radioactive storage area. Contact the U.S. Army Industrial Operations Command, AMSIO-SF office for disposal instructions (see Disposal Instructions below).

4. If you have any questions regarding these instructions, please contact the following POC's:

a. U.S. Army Tank-automotive & Armaments Command (TACOM), Armament Chemical Acquisition and Logistics Activity (ACALA), AMSTA-AC-SF, Safety Office DSN 793-6228/2965/2995, commercial (309) 782-6228/2965/2995.

b. Rock Island Arsenal Radiation Test Lab, SIORI-SEM, test result information: Mr. Thomas G. Gizicki or Mr. Ronald Lund, DSN 793-7889/7925 commercial (309) 782-7889/7925.

RADIOACTIVE WASTE DISPOSAL INSTRUCTIONS

Dispose radioactive waste in accordance with (IAW) AR 11-XX, Chap 2, paragraph 2-7, by turning in the material to your installation radiation protection officer (RPO) for consolidation. The RPO will contact the Executive Agency for Low-Level Radioactive Waste at

(Continued on page 8)

If the test result(s) are not within acceptable contamination levels, notify your Radiation Protection Office (RPO) immediately so that prompt action can be taken.

TANK-AUTOMOTIVE AND ARMAMENTS COMMAND,
ARMAMENT AND CHEMICAL ACQUISITION AND LOGISTICS ACTIVITY

Director,
TACOM-ACALA
ATTN: AMSTA-AC-SF
Rock Island, IL 61299-7630

Phone: 309-782-6499
DSN: 793-6499
Fax: 309-782-6758
Email: amsta-ac-sf@ria.army.mil

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HQ Industrial Operations Command, ATTN: AMSIO-SF, Rock Island, IL, 61299-6000 for final disposition instructions. The POCs are Mr. Kelly Crooks or Mr. Derek Cornette, AMSIO-SF, DSN 793-0338/1736/1883 or 309-782-0338/1736/1883, email: amsio-sf@ioc.army.mil, crooksk@ioc.army.mil, cornetted@ioc.army.mil, or hayess2@ioc.army.mil.

RADIATION SAFETY TRAINING

The new year is upon us and so is the new license. The one thing that is not new is the need for radiation safety training. Training is still an NRC license requirement and still the best way to manage our radioactive materials. Topics of discussion are:

a) Introduction and Definitions

b) Miscellaneous Radioactive Material

c) Tritium

d) Depleted Uranium

e) Regulations, SOPs, and NRC Licenses

f) Wipe Test and accountability

g) Storage and Transportation

h) Measuring Instruments and Portable Radiac Meters

i) Emergency Procedures

j) Decontamination Procedures

k) Medical Evaluation and Monitoring

l) Radioactive Material in Foreign Equipment

If you have a need for training, attend the course nearest you. The schedule for the upcoming year is listed below.

If you have any questions Please call Wayne Cook at DSN 793-2429 or Comm (309)782-2429 or e-mail cookw@ria.army.mil.

FY 99 RADIATION SAFETY CLASS SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan					DLA (Stockton CA)														Rock Island							Ft. Knox						
Feb									Rock Island														Ft. Polk								
Mar									Ft. Hood														Arkansas NG								
Apr						N. Riverside, IL							Ft. Drum													Korea						
May	Korea																									Rock Island					
Jun							Hawaii																					Germany			
Jul	Germany																														
Aug			Ft. Lewis																					Rock Island							
Sep																															